

# PakWeatherLens: Pakistan Weather Insights Dashboard

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**Project Description:** PakWeatherLens is an interactive real-time weather dashboard for popular cities in Pakistan. It visualizes current and past weather data including temperature, humidity, and weather conditions, combining API data with intuitive pixel-art icons and modern charts.

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## Key Features

- Weather data for 15+ major Pakistani cities
  - Today vs Yesterday comparison with historical data
  - Visual metrics: temperature, humidity, and weather conditions
  - Interactive charts: line plots, heatmaps, radar charts
  - Pixel-art icons and animations for engaging UI
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## Data Science Workflow

- Real-time data fetching using WeatherAPI
  - Data cleaning and combination for multiple cities and dates
  - Visualization using Matplotlib and Seaborn
  - Streamlit app development for interactive web interface
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## Technologies Used

- Python (requests, pandas, matplotlib, seaborn)
- Streamlit for UI
- WeatherAPI for weather data
- Pillow for image processing
- Base64 encoding for background embedding
- Platform: Anaconda Navigator (Jupyter Notebook, VS Co